Figure 4.33 Typical layout of linear potentiometers for AASHTO2C and AASHTO2R

4.8 Test Descriptions

AASHTO1

Visual cracking was first observed just outside the transverse U-wraps enclosing the damaged region at 42.0 k. The crack formed on the side of the girder with the ruptured prestressing strand. After the first three initial loading cycles, three additional visible cracks formed at the edge of the CFRP U-wraps in the damaged region. These cracks formed on the same side as the previous crack and extended from the edge of the CFRP U-wrap to the top of the bottom flange. It should be noted that the three cracks that formed during the initial static test did not significantly propagate during the fatigue loading phase. After the completion of 2 million cycles of fatigue loading, the midspan deflection of the girder, at 45.2 k, degraded from an initial value of 0.771 in to 0.922 in. This resulted in a total midspan residual deflection of 0.12 in due to fatigue-creep of the concrete (ACI 215 1997). As well, very little degradation in stiffness was observed in the girder.